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EXAMINER

WILSON, ROBERT W

ART UNIT PAPER NUMBER

2661

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/560,217

Applicant(s)

HANNUKSELA, MISKA

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27,28,30-35,38,41,43-49,51 and 53-101 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27,28,30-35,38,41,43-49,51 and 53-101 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____


PHIRIN SAM
PRIMARY EXAMINER

Claim Rejections - 35 USC § 103

1.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2.0 Claims 27, 33-35, 38, 45, 46-49, 53-54, 61, 63-64, 78, 89-90, 97-99, & 100-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (WO 98/37699) in view of Chen (U.S. Patent No.: 6,040,866).

Referring to claim 27, Colby teaches: A content manager (118 per Fig 3) (re-ordering means) which is a part of a server. The content server reorders combined video and audio frames into a slide show consisting of video frames (primary data units) and video (secondary data units) in and increasing likelihood of receiving primary frames and decreasing the likelihood of receiving secondary units in time to be play by sending them over a channel to the client. Colby does not expressly call for: receiving the data units in time to be played back at its scheduled playback time. Chen teaches: receiving the data units in time to be played back at a scheduled playback time per Fig 1 or per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the playback time of Chen to the reordering of Colby in order to minimize the size of the buffer in the client.

In addition Colby teaches:

Regarding claim 33, The server reorders a sequence of video or moving pictures.

Regarding claim 34, the server reorders a sequence of video

Regarding claim 35, the server reorders audio and video or multimedia.

Regarding claim 61, the server reorders the audio and video data. It would have been obvious to one of ordinary skill in the art perform dynamically in order to minimize the delay of transmission over the link

Regarding claim 63-64, the bandwidth of the audio is compressed which would result in data transmission bandwidth being available.

Referring to claim 38, Chen teaches a data transmission system including a server per Fig 1. The scheduler in the server sends data to the client just in time to be played back per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47 which results in receiving data without a pause or pauseless. Chen does not expressly call for: reordering the data into primary units and secondary units in which the primary units are received by the client over the secondary units which increases the likelihood that the primary units will be received and decreasing the likelihood that the

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secondary units will be received in time to be played back and inherently improving the quality of playback because playback is guaranteed just in time to playback.

Colby teaches: A content manager (118 per Fig 3) which is a part of a server. The content server reorders combined video and audio frames into a slide show consisting of video frames (primary data units) and video (secondary data units) and increasing likelihood of receiving primary frames and decreasing the likelihood of receiving the secondary units in time to be play by sending them over a channel to the client. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the reordering of Colby to the just in time playback system of Chen in order to reduce the bandwidth utilized between the client and server .

In addition Colby teaches:

Regarding claim 45, Colby checks the progress by putting all video data units in front of the audio data units and compress of the audio in order to better suit available used bandwidth.

Referring to claim 46, Colby teaches: A method of transmitting a data signal over a transmission link for playback by a client per Fig 3. The data signal consists of a sequence of combined video (primary data units) and audio (secondary data units). The content server reorders combined video and audio frames into a slide show consisting of video frames (primary data units) and video (secondary data units) and increasing likelihood of receiving primary frames and decreasing the likelihood of receiving the secondary units for playback by sending them to the client over a channel. Colby does not expressly call for: receipt of the primary data units at the client in time to be playback at their scheduled playback times providing pause-less playback. Chen teaches: receipt of the primary data units at the client in time to be playback at their scheduled playback times providing pause-less playback per Fig 1 or per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the playback time of Chen to the reordering of Colby in order to minimize the size of the buffer in the client.

In addition Colby teaches:

Regarding claim 47, restored to their original order per Abstract.

Regarding claim 48, Colby checks the progress by putting all video data units in front of the audio data units and compress of the audio in order to better suit available used bandwidth

Regarding claim 76 & 78, Colby teaches: the bandwidth of the audio is compressed which would result in data transmission bandwidth being available.

Referring to claim 49, It is within the level of one skilled in the art at the time of the invention to implement the method of claim 46 in software or computer program product. It would have been obvious to one of ordinary skill in the art at the time of the invention to store the computer program product on a computer readable medium so that it is executable on a processor.

In addition Colby teaches:

Regarding claim 89 & 90, the bandwidth of the audio is compressed which would result in data transmission bandwidth being available. It is within the level of one skilled in the art at the time

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of the invention to implement the limitations of claims 89 & 90 in software or computer program product. It would have been obvious to one of ordinary skill in the art at the time of the invention to store the computer program product on a computer readable medium so that it is executable on a processor

Referring to claim 53, Chen teaches: A data signal is created by the scheduler per Fig 1. The scheduler in the server sends data to the client just in time to be played back per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47 which results in receiving data without a pause or pauseless. Chen does not expressly call for: reordering the data into primary units and secondary units in which the likelihood of receiving the primary units before playback are increased and decreasing the likelihood of receiving the secondary units before playback. The quality of playback is improved because the playback is guaranteed to be received just in time. Colby teaches: A content manager (118 per Fig 3) which is a part of a server. The content server reorders combined video and audio frames into a slide show consisting of video frames (primary data units) and video (secondary data units) in which increasing likelihood of receiving primary frames before receiving secondary units in time to be play and sends them over a channel to the client is an inherent property of reordering the data units. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the reordering of Colby to the just in time playback system of Chen in order to reduce the bandwidth utilized between the client and server .

Referring to claim 54, Colby teaches: A content manager (118 per Fig 3) (re-ordering device) which is a part of a server. The content server reorders combined video and audio frames into a slide show (data signal) consisting of video frames (primary data units) and video (secondary data units). Increasing likelihood of receiving primary frames and decreasing the likelihood of secondary units in time to be play by sending them over a channel to a client.. Colby does not expressly call for: scheduled playback at the client or providing a pauseless playback signal and improving the quality of the data signal.

Chen teaches: scheduled playback at the client or providing a pauseless playback signal and improving the quality of the data signal per Fig 1 or per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the scheduled playback at the client of Chen to the reordering device of Colby in order to minimize the size of the buffer in the client and it should also be noted quality is improved by guaranteeing the playback via scheduled time.

In addition Colby teaches:

Regarding claim 97, the server reorders the audio and video data. It would have been obvious to one of ordinary skill in the art perform dynamically in order to minimize the delay of transmission over the link

Regarding claim 98-99, the bandwidth of the audio is compressed which would result in data transmission bandwidth being available.

Referring to claim 100, Colby teaches: A client per Fig 3 for receiving a data signal which includes video (primary data units) and audio (secondary data units). The content server reorders combined video and audio frames into a slide show consisting of video frames (primary data

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units) and video (secondary data units) increasing likelihood of receiving primary frames and decreasing the likelihood of receiving secondary units before playback. Colby does not expressly call for: scheduled playback at the client or providing a pauseless playback signal and improving the quality of the data signal. Chen teaches: scheduled playback at the client or providing a pauseless playback signal and improving the quality of the data signal per Fig 1 or per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the scheduled playback at the client of Chen to the reordering device of Colby in order to minimize the size of the buffer in the client and it should also be noted quality is improved by guaranteeing the playback via scheduled time.

Referring to claim 101, Colby teaches: A method or receiving a data signal by a client per Fig 3. The client receives a data signal including video (primary data units) and audio (secondary data units). The client receives a slide show consisting of video frames (primary data units) and video (secondary data units) increasing the likelihood of receiving primary frames and decreasing the likelihood of receiving secondary units in time for playback by sending them over a channel to a client. Colby does not expressly call for: scheduled playback at the client or providing a pauseless playback signal and improving the quality of the data signal. Chen teaches: scheduled playback at the client or providing a pauseless playback signal and improving the quality of the data signal per Fig 1 or per col. 2 line 38-67 or col. 3 line 26-col. 5 line 47. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the scheduled playback at the client of Chen to the reordering device of Colby in order to minimize the size of the buffer in the client and it should also be noted quality is improved by guaranteeing the playback via scheduled time.

3.0 Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (WO 98/37699) in view of Chen (U.S. Patent No.: 6,040,866) further in view of Rose (U.S. Patent No.: 6,731,811)

Regarding claim 30, the combination of Colby and Chen teaches the server of claim 27. The combination of Colby and Chen does not expressly call for: a data signal which is scalable. Rose teaches: scalability per col. 1 lines 20-25 & col. 8 lines 63-65. It would have been obvious to one of ordinary skill in the art at the time of the invention to add scalability of Rose to the server of the combination of Colby and Chen in order to perform compression.

Regarding claim 31, the combination of Colby and Chen teaches the server of claim 27, The combination of references do not expressly call for: in the signal is scalable in a domain selected from a group consisting of the temporal, spatial, the spectral and SNR domain but the combination of references teaches MPEG. Rose teaches: providing temporal, spatial, and SNR scalability or spectral per col. 1 lines 20-25 & col. 8 lines 63-65. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide temporal, spatial, and SNR scalability or spectral processing of Rose to the server of the combination of Colby and Chen in order to perform compression.

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4.0 Claims 32, 41, & 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (WO 98/37699) in view of Chen (U.S. Patent No.: 6,040,866) further in view of Toebe (U.S. Patent No.: 5,959,690)

Regarding claim 32, the combination of Colby and Chen teaches a content server of claim 27, The combination of Colby and Chen does not expressly call for: an editor but teaches reordering of video streams. Toebe teaches: an editor per col. 23 lines 26-45. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the editor of Toebe to the system of the server of the combination of Colby and Chen in order to build a server which reorders video streams.

Regarding claim 41, the combination of Colby and Chen teaches the data transmission system of claim 4. The combination of Colby and Chen does not expressly call for: an editor but teaches reordering of video streams. Toebe teaches: an editor per col. 23 lines 26-45. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the editor of Toebe to the transmission system of the combination of Colby and Chen in order to build a server which reorders video streams.

Regarding claim 51, the combination of Colby and Chen teaches a computer program product according to claim 49. The combination of Colby and Chen does not expressly call for: an editor but teaches reordering of video streams. Toebe teaches: an editor per col. 23 lines 26-45. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the editor of Toebe to the system of the server of the combination of Colby and Chen in order to build a server which reorders video streams. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the software for the server as a computer program product. It would have been obvious to one of ordinary skill in the art at the time of the invention to store the software on a computer readable medium so that it would be executable on a processor.

5.0 Claims 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (WO 98/37699) in view of Chen (U.S. Patent No.: 6,040,866) further in view of Jeannin (U.S. Patent No.: 5,929,940)

Referring to claim 43, Colby and Chen teaches: the data transmission system according to claim 38. The combination of Colby and Chen do not expressly call for: client is a mobile terminal. Jeannin teaches: client is a mobile terminal per col. 1 lines 22-47. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the mobile terminal of Jeannin to the data transmission system of Colby and Chen in order to build a system in which multimedia data can be received at a wireless terminal.

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Referring to claim 44, the data transmission system according to claim 38
The combination of Colby and Chen do not expressly call for: client is a mobile telephone.
Jeanin teaches: client is a mobile telephone per col. 1 lines 22-47. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the mobile terminal of Jeannin to the data transmission system of Colby and Chen in order to build a system in which multimedia data can be received at a wireless terminal.

7.0 Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (WO 98/37699) in view of Chen (U.S. Patent No.: 6,040,866) further in view of Toebe (U.S. Patent No.: 5,959,690)

Referring to claim 51, the combination of Colby and Chen teaches: the computer program product according to claim 49. The combination of Colby and Chen does not expressly call for: an editor but teaches reordering of video streams. Toebe teaches: an editor per col. 23 lines 26-45. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the editor of Toebe to the transmission system of the combination of Colby and Chen in order to build a server which reorders video streams. It is within the level of one skilled in the art at the time of the invention to implement the server of the combination of Colby, Chen and Toebe in software or computer program product. It would have been obvious to one of ordinary skill in the art at the time of the invention to store the computer program product on a computer readable medium so that it is executable on a processor.

Claim Rejections - 35 USC § 112

8.0 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.0 Claims 67, 74, & 87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What is meant by "and/or"? Does it mean "and" or "or" ?

Claim Rejections - 35 USC § 112

10.0 The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11.0 Claims 27-28, 30-35, 38, 41, 43-48, 49, 51, & 53-101 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claims 27, 38, 46, 49, 53, 54, 100, & 101, the specification discloses on Pg 20 that the primary and secondary data units are reordered to minimize buffering time that the secondary units may be vulnerable to delay and arrive later.

Wherein the specification is there written description for “reordering the primary and secondary units increases the likelihood that the primary unit will be received in time to be played back and decreasing the likelihood that the secondary unit will be received in time to be played back”?

Referring to claims 55, 68, 81, & 91, the specification describes an algorithm associated with calculation of full quality rate, reduced quality rate, reordering and buffering time per Pgs 23-38.

Where in the specification is written description for: calculating average bit rate for the data signal based upon the average rate for the primary and secondary; calculating a buffering time for the full quality playback; calculating the buffering time for the reduced quality playback; and shift position”?

Response to Amendment

12.0 Applicant's arguments with respect to claims 27-28, 30-35, 38, 41, 43-48, 49, 51, 53-101 have been considered but are moot in view of the new ground(s) of rejection.. Please review above rejection for details.

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Conclusion

13.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661

RWW
5/17/05



PHIRIN SAM
PRIMARY EXAMINER